REMARKS

Reconsideration and allowance in view of the foregoing amendments and the following remarks are respectfully requested.

Claims 34-37 were pending. In this amendment, claims 34 and 35 are amended and new claims 38 and 39 are presented. Accordingly, claims 34-39 are now pending.

The amendment to claim 34 is merely editorial and is not a narrowing amendment made for purposes of patentability.

Similarly, claim 35 is amended to depend from and conform to new claim 38. The amendment to claim 35 is not a narrowing amendment made for purposes of patentability.

The amendment to the specification merely adds the patent number corresponding to the application from which this application claims priority.

Inventorship has also been amended in an accompanying Request under Rule 48(b) in which all inventors except Thomas M. Shimei are deleted.

Claims 34-37 stand rejected under 35 U.S.C. §103(a) as being unpatentable over U.S. Patent No. 4,803,050 to Mack in view of U.S. Patent No. 5,525,302 to Astle. The rejections are respectfully traversed on the grounds that the cited references do not disclose all of the elements of the rejected claims, and, moreover, the proposed combination of Mack '050 and Astle '302 is motivated by hindsight reconstruction of the claimed invention.

The claimed invention, as recited in independent claim 34, is directed to a substance transfer device for simultaneously dispensing substances into and removing substances from two or more receptacles. The device includes a support member with a substance dispensing apparatus and a substance removing apparatus mounted to it. The substance dispensing apparatus is constructed and arranged to simultaneously dispense substance into each receptacle of a first set of two or more receptacles. The substance removing apparatus is constructed and arranged to simultaneously remove substance from each receptacle of a second set of two or more receptacles. The device is constructed and arranged to remove substance from the receptacles of the second set and dispense substances into the receptacles of the first set at about the same time.

Mack '050 describes an apparatus for dispensing and aspirating liquids in an automated immunoassay instrument. The instrument includes a probe assembly 56 which includes a substrate dispensing probe 66 and a quench/diluent dispensing probe 68 positioned to engage a single test tube and a detergent dispensing probe 72 and an aspirating probe 74 positioned to engage a second test tube adjacent the first test tube. Mack '050 further describes a complicated receptacle processing procedure which includes two wash cycles followed by a substrate dispensing step.

A rack 18b is placed below the carriage 20 which carries the probe assembly 56. A first wash cycle consists of: (1) aspirating the reagent and sample serum through probe 74; (2) dispensing detergents into the test tube through sample probe 72; (3) aspirating the detergent through sample probe 74; (4) dispensing detergent through the sample probe 72; (5) aspirating detergent through the sample probe 74; and (6) dispensing detergent through sample probe 72. (See col. 6, lns 40-63). This first wash cycle is performed on each test tube in a row of test tubes. In the example shown in Figure 5 of Mack '050, the first wash cycle is first performed on each of test tubes 1-5 in the first row. After performing the first wash cycle on test tube 5, the carriage moves to test tube 6 (i.e., the first test tube of the next row) where the first wash cycle is performed on test tube 6. Thereafter, the carriage 20 moves back one row to position the probes 74 and 72 above test tube 1. The last step of the first wash cycle was dispensing detergent through sample probe 72. Thus, test tube 1 has had a "soak time" while the first wash cycle was performed on each of test tubes 2-6. With the wash probes 72 and 74 now positioned again within test tube 1, the second wash cycle is performed on test tube 1. The second wash cycle consists of: (1) aspirating detergent through sample probe 74; (2) dispensing additional detergent through sample probe 72; and (3) drying the test tube with sample probe 74. (See col. 7, lns. 35-50). Thereafter, the carriage 20 is moved relative to the rack 18b so as to position the wash probes 72 and 74 within test tube 7 so that the first wash cycle can be performed on test tube 7. Next, the wash probes 72 and 74 are moved back one row to test tube 2, which has been soaking in detergent while the first wash cycle was performed on each of test tubes 3-7 and the second wash cycle was performed on test tube 1. With the wash probes 72 and 74 positioned within test tube 2, the second wash cycle is then performed on test tube 2. The substrate probe 66 is offset from the wash probes 72

and 74 by one position in the row, thereby placing substrate probe 66 within test tube 1 while the wash probes 72, 74 are disposed within test tube 2. While the wash probes 72 and 74 are positioned within test tube 2 so as to perform the second wash cycle on test tube 2, substrate reagent is added to the now dry test tube 1 through the substrate probe 66. (See col. 7, lns. 50-57).

Astle '302 describes a device for simultaneously transferring multiple samples. In the example described, the dispensing apparatus includes "[p]istons 50 and channels 60 [ ] laid out in a 8 x 12 configuration" to provide a conduit for dispensing or aspirating fluid to or from each receptacle of a 96-receptacle sample tray. (Col. 6, lns 50-52). In other words, substance is dispensed into or aspirated from all of the receptacles of the sample tray simultaneously.

Mack '050 does not describe an apparatus in which substances are dispensed into two or more receptacles of a first set simultaneously and aspirated from two or more receptacles of a second set simultaneously and at about the same time that the substances are dispensed into the receptacles of the first set. This was acknowledged in the Office Action, (Office Action at page 3).

Astle '302 does not describe a device in which substances are dispensed into two or more receptacles of a first set simultaneously and aspirated from two or more receptacles of a second set simultaneously and at about the same time that the substance is being dispensed into the receptacles of the first set. Astle '302 describes a device in which substance is dispensed into all of the receptacles of the sample tray simultaneously or substance is aspirated from all of the receptacles of the sample tray simultaneously. (See Col. 8, lines 19-23). Dispensing and aspiration does not occur at about the same time.

Accordingly, the combination of Mack '050 and Astle '302 does not disclose all of the elements of rejected claim 34 and, for example, lacks teaching of a device "constructed and arranged to remove substance from each of the receptacles of the second set with said substance removing apparatus at about the same time said substance dispensing apparatus is dispensing substance into each of the receptacles of the first set."

Furthermore, the proposed incorporation of the teaching of Astle '302 into the device described in Mack '050, even if technologically possible, which applicants do not concede, is simply a hindsight reconstruction of the claimed invention and is not based on a motivation to combine that

is described in either of the references or would have been known to a person of ordinary skill in the art.

"When a rejection depends on a combination of prior art references, there must be some teaching, suggestion, or motivation to combine the references." In re Rouffet, 47 USPQ2d 1453, 1456 (Fed. Cir. 1998); see also MPEP § 2143.01. Virtually all inventions are combinations of old elements. See In re Rouffet, 47 USPQ2d at 1457. If identification of each claimed element in the prior art were sufficient to negate patentability, the Patent Office could use the claimed invention itself as a blueprint for piecing together elements in the prior art to defeat the patentability of the claimed invention. See Id. To prevent the use of hindsight based on the teachings of the patent application, the Patent Office must show a motivation to combine the references in the manner suggested. See Id. at 1457-1458.

In Rouffet, the Court of Appeals held that the Board of Patent Appeals and Interferences did not err in finding that all elements recited in the claims of Rouffet's application were contained in the combined disclosures of three prior art references. See In re Rouffet, 47 USPQ2d at 1457. The Court did hold, however, that the Board erred in determining that one skilled in the art would have been motivated to combine the references in such a manner as to render the rejected claims obvious. See Id. at 1457.

The situation is, at best, the same in this case. Even if all elements recited in the claims can be found in the combined disclosures of Mack '050 and Astle '302 – which, as demonstrated above, is not the case – there is no reason that one of ordinary skill in the art would have been motivated to combine these references in such a manner as to render the rejected claims obvious.

Mack '050 describes an apparatus in which two wash probes engage a single test tube and alternately dispense substance into and aspirate substance from the test tube. Two dispensing probes engage a single test tube adjacent to the test tube engaged by the two wash probes. Because of the need for a soak time during the wash procedure, the device of Mack '050 is constructed, arranged, and operated so that a first wash cycle is performed on all test tubes of each row and a second wash cycle is performed while the first wash cycle is being performed on the test tubes of a second row. Astle '302 describes a device which dispenses to or aspirates from

all the receptacles in a sample tray at once, but which cannot dispense and aspirate at the same time.

It has been held that a rejection is improper where the "suggested combination of references would require a substantial reconstruction and redesign of the elements shown in [the primary reference] as well as a change in the basic principle under which the [primary reference] construction was designed to operate." In re Ratti, 270 F.2d 810, 813, 123 USPQ. 349, 352 (C.C.P.A. 1959) (emphasis added), see also MPEP § 2143.01, at page 2100-127.

Incorporating the transfer apparatus of Astle '302 into the device of Mack '050, if even possible, would require a substantial redesign of the Mack device and would change its principle of operation. The two devices are substantially different from each other from a structural and operational standpoint. The mere fact that the devices of both references aspirate fluids from and dispense fluids to receptacles does not mean that it would have been obvious, or even possible, to combine the teachings of the two references in order to "increase the throughput of the work station" as suggested in the Office Action. (see Office Action at page 3). Moreover, the two-cycle wash operation of Mack, which provides the necessary soak time, would not be possible if the transfer device aspirated all receptacles simultaneously.

For the foregoing reasons, the applicant respectfully submits that the Office Action fails to set forth a *prima facie* case of obviousness of claims 34-37 based on the teaching of Mack '050 and Astle '302. Accordingly, the rejection of claims 34-37 under §103 is improper and should be withdrawn.

Dependent claims 35-37 are believed to be allowable as being dependent from allowable independent claim 34.

Furthermore, with respect to dependent claim 35, which recites a pair of handle members "to facilitate handling of said substance transfer by a user," no such structure is described in either Astle '302 or Mack '050. In fact, Astle '302 and Mack '050 describe automated instruments in which the substance transfer devices are mechanically controlled. Accordingly, neither includes handle members nor would it have been obvious to have incorporated handle members in either device.

Dependent claim 36 recites contamination limiting element engaging structure and dependent claim 37 recites contamination limiting element disengaging structure. The Office Action acknowledges that Mack fails to teach contaminating limiting elements. (Office Action at page 3). The Office Action proposes to remedy this deficiency by relying on the teaching of contamination limiting elements in Astle. Mack reviews the possibility of cross-contamination and addresses the problem by washing the aspirator probe 49, flow cell 128, and peristaltic pump 130 with quench reagent when the valve 143 is open and valve 132 is closed. (See col. 8, lns. 66 - col. 9, ln. 2). Mack is complete in itself. Thus, no persons of ordinary skill in the art would have seen fit to modify Mack in the manner proposed in the Office Action, since Mack already addresses the problem of cross-contamination.

Newly presented claim 38 recites handle structure and is believed to be allowable as dependent from allowable independent claim 34 and furthermore for the additional reasons cited above with respect to dependent claim 35.

New claim 39 depends from independent claim 34 and is believed to be allowable as being dependent from the allowable base claim.

New claim 40 depends from claim 38 but otherwise recites the same substantive language as claim 39. Claim 40 is believed to be allowable as being dependent on an allowable base claim.

All rejections and objections having been addressed, it is respectfully submitted that the present application is now in condition for allowance and a notice to that effect is earnestly requested.

Respectfully submitted,

By _____

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